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MEMORANDUM FOR: Director of Central Intelligence  
THROUGH: Deputy Director/Intelligence  
SUBJECT: Primary Energy Production in the Sino-Soviet  
Bloc and the Free World

1. This memorandum is in response to your request for comparative data on the growth of primary energy production in the Sino-Soviet Bloc and the Free World.

~~2. Primary energy is the total resource used in the production of heat and power. It is derived principally from solid fuels, petroleum products, and falling water.~~  
~~It is an indication of economic development.~~

2. During the next five years the Sino-Soviet Bloc plans a higher rate of growth in primary energy production than the Free World. Bloc Energy production in 1955 equalled about 30 percent of the Free World production. In 1960 it will increase to about 40 percent. In spite of this relative increase, however, the absolute gap between the Bloc and the Free

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World will not decrease. In fact ~~the Free World~~ primary energy production <sup>in the Free World by</sup> will increase <sup>by</sup> 15,200 trillion <sup>British Thermal units</sup> (Btu) while Bloc production <sup>in the Bloc</sup> will increase <sup>by only</sup> 12,600 trillion Btu. Thus the gap will <sup>increase by</sup> grow about 5 percent.

3. <sup>Primary</sup> ~~Soviet Bloc~~ energy production <sup>in the Sino-Soviet Bloc</sup> is primarily dependent upon solid fuels while Free World energy production <sup>in the</sup> is primarily dependent upon petroleum products. As  ~~Bloc~~ production of petroleum <sup>in the Bloc</sup> increases, however, the importance of solid fuels <sup>to the</sup> ~~to the~~ Bloc <sup>will</sup> ~~is~~ declining <sup>slightly</sup>. By 1960, solid fuels are expected to supply only about 75 percent of total Bloc energy <sup>which is to be</sup> ~~production~~ compared with about 81 percent in 1955.

~~In 1960 petroleum products will account for 25 percent of total Bloc energy as compared with 18 percent today.~~

4. <sup>hydroelectric</sup> In 1955, ~~hydro~~ power contributed only <sup>0.5</sup> ~~one-half of one~~ percent <sup>of</sup> to total Sino-Soviet Bloc energy production <sup>in the</sup> and only 2 percent <sup>of total energy production in</sup> to the Free World total. These ratios will not change significantly by 1960.

5. <sup>produced</sup> Electricity ~~from~~ nuclear energy will not affect

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significantly the world <sup>production</sup> output of primary energy in 1960. In fact, in 1960, <sup>the military and "peaceful"</sup> nuclear energy programs of the US and <sup>the</sup> USSR will still use more electricity than will be generated by plants powered with nuclear fuel.

The USSR has announced that by 1960 it will have from 2,000,000 <sup>million</sup> to ~~2,500,000~~ <sup>million</sup> kilowatts <sup>(kw)</sup> of generating capacity, <sup>in plants powered with</sup> utilizing nuclear fuel. If completed, these power plants, could supply over ~~six~~ <sup>6</sup> percent of total Soviet <sup>production of</sup> electric power ~~output~~. Plans <sup>by the</sup> announced US ~~plans~~ <sup>generating</sup> provide for a capacity of only 800,000 <sup>kw in plants powered with nuclear fuel</sup> kilowatts by 1960, which could supply about ~~one half of one~~ <sup>0.5</sup> percent of total US <sup>production of</sup> electric power ~~output~~ <sup>as</sup> forecast for 1960.

6/. The USSR, having produced 58 percent of the ~~Bloc's~~ <sup>primary</sup> total energy <sup>production in the Sino-Soviet Bloc</sup> output in 1955, will increase this share to 62 percent in 1960. Conversely, the US share <sup>total</sup> of energy <sup>production in the</sup> in the Free World output will ~~drop~~ <sup>decrease</sup> very slightly and will amount to about one-half of the Free World total in 1960.

7 8. The attached charts present the above data graphically. <sup>the</sup> The attached ~~Table~~ <sup>Table</sup> presents detailed data on the regional

production of primary energy by principal regions and categories, for selected years from 1940 through 1960.

OTTO E. GUTHE  
Assistant Director  
Research and Reports

Sino-Soviet Bloc

→ USSR

→ Solid fuels a/  
Crude oil and natural gas b/  
Hydroelectric power c/  
→ Total

European Satellites

same

Communist Asia

same

Sino-Soviet Bloc

same

Set table  
with totals below  
subdivisions  
+  
indicate totals (not percents)

Btu

10<sup>12</sup>